For the Examiner's convenience, all pending claims are listed below. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

- 1. An isolated polypeptide comprising an amino acid sequence of SEQ ID NO:1
- 2. A method for producing a polypeptide of claim 1, the method comprising:
- a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and
- b) recovering the polypeptide so expressed.
- 3. A method for detecting a transcript encoding a polypeptide in a sample, the method comprising:
  - a) hybridizing a polynucleotide which encodes the polypeptide of claim 1 with the sample containing nucleic acids,
  - b) detecting complex formation between the polynucleotide and at least one nucleic acid of the sample, wherein complex formation indicates the presence of the transcript of the polypeptide in the sample.
- 4. The method of claim 3, wherein the nucleic acids of the sample are amplified prior to hybridization.
- 5. A composition comprising an effective amount of a polypeptide of claim 1 and an acceptable excipient.
- 6. A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
- b) detecting agonist activity in the sample.
- 7. A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:
  - a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
  - b) detecting antagonist activity in the sample.
- 8. A method for using a protein to screen a plurality of molecules or compounds to identify at least one ligand, the method comprising:
  - a) combining the protein of claim 1 with the molecules or compounds under conditions to allow specific binding; and
  - b) detecting specific binding, thereby identifying a ligand which specifically binds the protein.
- 9. The method of claim 8 wherein the molecules or compounds are selected from DNA molecules, RNA molecules, peptide nucleic acids, peptides, proteins, mimetics, agonists, antagonists, antibodies, immunoglobulins, inhibitors, and drugs.
- 10. An isolated polynucleotide encoding a polypeptide of claim 1, or the complement thereof.
- 11. An isolated polynucleotide sequence comprising SEQ ID NO:2, or the complement thereof.
- 12. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 10, the method comprising:
  - a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and

which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and

- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.
- 13. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 10, the method comprising:
  - a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
  - b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.
- 14. A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a polynucleotide sequence of claim 10, the method comprising:
  - a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,
  - b) detecting altered expression of the target polynucleotide, and
  - c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.
  - 15. A method for assessing toxicity of a test compound, said method comprising:
  - a) treating a biological sample containing nucleic acids with the test compound;
  - b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 10 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 10 or fragment thereof;

- c) quantifying the amount of hybridization complex; and
- d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.
- 16. A purified antibody which specifically binds to the polypeptide of claim 1.
- 17. The antibody of claim 16, wherein the antibody is:
  - (a) a chimeric antibody;
  - (b) a single chain antibody;
  - (c) a Fab fragment;
  - (d) a F(ab')<sub>2</sub> fragment;
  - (e) a Fv fragment; or
  - (f) a humanized antibody.
- 18. A pharmaceutical composition comprising an antibody of claim 16 and a pharmaceutically acceptable excipient.
- 19. A method of diagnosing a condition or disease associated with the expression of AUTOP in a subject, comprising administering to said subject an effective amount of the pharmaceutical composition of claim 18.
  - 20. A pharmaceutical composition of claim 18, wherein the antibody is labeled.

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